

# Anti-Aging Medicine: Resounding, Independent Support for Expansion of an Innovative Medical Specialty

by Dr. Ronald Klatz



Article reprinted with permission from Generations, Journal of the American Society on Aging, © Copyright 2002 ASA.  
Cover image reprinted with permission, © Copyright Marianne Gontarz York 2002.

The World Health Organization estimates that by the year 2025, we will be a planet of 8 billion residents. At that time, the number of people age 65 and older will reach 800 million --one of every ten persons. We will also enjoy, worldwide, an average life expectancy of 73 years. In order to avert the financially, socially, and medically burdensome task of caring for the swelling aged population, rapid adoption of safe and effective diagnostic and treatment processes that can improve the quality of life in these extended years is a critical imperative to maintain the well-being of society in the twenty-second century.

In 1993, a dozen pioneering physicians and scientists met to create the medical specialty of anti-aging medicine. To accomplish a campaign of education and advocacy to advance the acceptance of anti-aging medicine around the globe, we formed the American Academy of Anti-Aging Medicine. As the academy founder, I present to you the original, official definition of anti-aging medicine:

Anti-aging medicine is a medical specialty founded on the application of advanced scientific and medical technologies for the early detection, prevention, treatment, and reversal of age-related dysfunction, disorders, and diseases. It is a healthcare model promoting innovative science and research to prolong the healthy lifespan in humans. As such, anti-aging medicine is based on principles of sound and responsible medical care that are consistent with those applied in other preventive health specialties.

Anti-aging medicine has matured into a prestigious medical field that has become recognized by independent public policy organizations. In 2001, the World Future Society -- a nonprofit educational and scientific organization founded in 1966 as a neutral clearinghouse exploring the impact of social and technological developments on the future -- heralded anti-aging medicine as an effective solution to the growing aging population worldwide (Wagner, 2001). The World Future Society notes that "geriatrics may ... be suffering from competition arising in a new health-care subspecialty: anti-aging." Citing an "aging baby-boom generation [that] is bringing a potential medical crisis to the fore and a critical lack of doctors who specialize in treating elderly patients," the World Future Society refers to anti-aging medicine as a potential answer, embracing "a realignment of priorities from the problems of the elderly to the opportunities of longer lives" (Wagner, 2001). The society also notes that the number of members of the American Academy of Anti-Aging Medicine and certified anti-aging physicians and health practitioners is rising steadily, while the number of certified geriatricians is on the decline.

Similarly, the highly respected Global Aging Initiative of the Center for Strategic and International Studies (2001) proclaimed its support of anti-aging medicine in its "Summary Report of the Co-chairmen and Findings and Recommendations of the CSIS Commission on Global Aging." . Among the report's conclusions were that governments should "pursue an integrated strategy designed to raise productivity by ... providing financial support, and creating a favorable tax and regulatory environment for research and development in the new services and health sectors, including disease prevention, anti-aging medicine, and other innovative technology."

Indeed, the utilization of advanced medical technologies is a cornerstone of anti-aging medicine. The American Academy of Anti-Aging Medicine offers a hopeful and attainable model for medicine in the new millennium founded on the dramatic advancements offered by the biotech revolution. The model identifies a continued and expanding arena of discovery and advancement in our understanding of ways to mitigate age-related disability and disease and is based on what the academy calls "technodemography." As conceived by the organization technodemography is the application of modern biotechnology to the issues of diagnosis, prevention, and intervention in aging, such that one may extrapolate future progress in human aging based on the application of innovative medical interventions. The model incorporates the impact that five key areas in biomedical technology can be expected to exert on gains in human longevity and assumes a doubling of the amount of medical technology and knowledge in this area every three and one-half years after the year 2000. The five key areas are as follows:

- Genetic engineering, including work with stem cells. Advancemans would allow scientists to alter genetic make-up to eradicate disease and would permit development of a supply source for human cells, tissues, and organs for use in acute emergency care as well as treatment of chronic, debilitating disease.
- Cloning. This technique holds tremendous promise in producing consistent organs, tissues, and proteins for biomedical use and transplantation in humans.
- "Nanotechnology." This form of technology would enable scientists to use tiny tools to manipulate human biology at its most basic levels.
- Artificial organs. Advancement in this area would make replacement body parts readily available.
- Nerve- impulse continuity (brain and spinal cord). , Progress in this area would allow nerve signal transmission to be maintained without interruption, despite physical trauma.

Recently, ardent critics have actually begun to gravitate toward adoption of anti-aging medicine, first, by renaming it so that the concept appears to be their original creation. *Longevity medicine, successful aging, healthy aging, optimal aging, and aging gracefully*, among other synonyms are being substituted by conventional gerontologists for the term *anti-aging*. The medical premise of these alternative terms -- incorporating "all means that would extend healthy life ... as well as advanced medical care and new discoveries ... and even manipulating ... genetic factors" (International Longevity Center-USA, 2001.) -- is completely identical to the original model of anti-aging medicine established nine years ago by the founders of anti-aging medicine -- the physicians, health professionals, and scientist of the American Academy of Anti-Aging Medicine.

In its continued effort to absorb what it cannot deny, the gerontological establishment has expressed a number of conclusions about anti-aging medicine that are presented below, along with a response to each that represents the position of the American Academy of Anti-Aging Medicine.:

- "Some people may prefer to trivialize 'anti-aging,' but it has been a very important part of medical research. ... Many of today's anti-aging therapies are the same ones that physicians and scientists were developing in the 1920s and 1930s" (Butler., 2000).

**Response:** This statement indicates the important presence of the anti-aging specialty in the healthcare spectrum. In the past, the gerontological establishment has gone to great lengths to misrepresent the scientific validity of hormone replacement therapy, which has been used in one approach or another for the past 70 years. In actuality, hormone replacement therapy, performed judiciously and administered in appropriate doses by qualified anti-aging physicians, has been found to improve health byens of thousands of peer-reviewed research studies .

- “‘Anti-aging’ medicine could be simply defined as any intervention that delays the development of age-dependent pathology and other adverse age-related changes that are not officially listed as diseases” (International Longevity Center-USA, 2001).

**Response.** This variant definition of anti-aging medicine is consistent with the original, official definition stated above. We are pleased that the gerontological establishment has at last grasped this concept.

- “Further extension [of human life expectancy] will almost certainly require biomedical intervention to delay age-related pathology and disease....Clearly, modern technology has made great strides toward improving human health and enabling greater numbers of people to survive into old age” (International Longevity Center-USA, 2001).

**Response.** A statement by the Board of Editors of *Scientific American* (2001) makes the point well: "Thanks to modern technology and medicine, people have taken much more control over their differential survival. Ills are not the barriers they once were. Our technology may exert the greatest influence."

All diseases fall into four categories.; The first three—inherited genetic disease, infectious disease, and trauma—account for only 10 percent of the cost for treating all disease in America. Ninety percent of all healthcare dollars are spent on extraordinary care in the last two to three years of life. Indeed, the leading causes of death have undergone a profound shift. Because of improvements in sanitation and infection control since the turn of the twentieth century, Americans are now losing their health and lives to heart disease (31.4%), cancer (23.3%), and stroke (6.9%) (U.S. Department of Health and Human Services, 2000). These three diseases, known collectively as the degenerative diseases of aging, swallow fifty percent of the U.S. healthcare budget. One hundred million Americans are currently being treated for one or another degenerative disease at a healthcare cost of more than \$700 billion per year. If we really want to make an impact on healthcare in this country and in the world, we must focus on the degenerative diseases of aging. If we can slow aging, we can eliminate more than 50percent of all disease overnight. We can alter this dreadful course by preventing, delaying, or reversing the diseases associated with aging.

Anti-aging medicine -- the application of any therapy or modality that delivers very early detection, prevention, treatment, or reversal of aging-related dysfunction and disease, thus enhancing the quality and extending the length of the human lifespan – is the most important new model for healthcare for this new millennium. Anti-aging medicine is the following:

- **It is scientific.** Anti-aging diagnostic and treatment practices are supported by scientific evidence and therefore cannot be branded as anecdotal.
- **It is evidence-based.** Anti-aging medicine is based on an orderly process for acquiring data in order to formulate a scientific and objective assessment upon which effective treatment is assigned.

- **Is well-documented by peer-reviewed journals** such as *Aging, American Journal of Cardiology, Journal of the American Geriatrics Society, and Journal of the American Medical Association*, among many others.

The benefits of anti-aging medicine are resounding and clear. As a global population, we are experiencing leaps in life expectancy, decreases in death rates from the leading causes of death (heart disease, cancer, and stroke), and, in the United States, we are seeing a decrease in the use of nursing home care. Most importantly, accessibility to quality medical care is improving (U.S. Federal Interagency Forum on Aging Related Statistics, 2000). Clearly, anti-aging medicine has made a distinct impression on evolving healthcare to the betterment for the public at large.

As the German physicist and Nobel Laureate Max Planck once remarked, “ An important scientific innovation rarely makes its way by gradually winning over and converting its opponents. ... Its opponents gradually die out and the growing generation is familiar with the idea from the beginning.”

It is gratifying that, in the ninth year since its formal beginnings, , anti-aging medicine is gaining recognition from the gerontological establishment. For 2002, the proponents of anti-aging medicine -- physicians, health professionals, scientists, and academics -- are hopeful that we will continue to close the philosophical gap between us and our gerontology colleagues to create widespread adoption of an innovative model of healthcare that demonstrates near-term potential to elevate the quality of life, and extend the length of life, for all.

#### REFERENCES:

- Board of Editors. March 2001. "The Future of Human Evolution," *Scientific American*.
- Butler, R. N. (moderator), et al. 2000. "Anti-Aging Medicine: What Makes it different from geriatrics?" *Geriatrics* 55(6): 36-43.
- Fifty facts from the World Health Report 1998*, [www.who.int/whr/1998.factse.htm](http://www.who.int/whr/1998.factse.htm).
- Health Care Financing Administration, 1996. *The Nation's Health Dollar: - Where It Came From/Where It Went.* Washington, D.C.
- International Longevity Center, 2001. *Workshop Report: "Is There an "Anti-aging" Medicine?"* New York: International Longevity Center-USA.
- Global Aging Initiative, Center for Strategic and International Studies. 2001. "Summary Report of the Co-Chairmen and Findings and Recommendations of the CSIS Commission on Global Aging," . Washington, D.C.
- Planck, M. 1959. *The Philosophy of Physics*. New York: Meridian Books.
- U.S. Federal Interagency Forum on Aging Related Statistics, 2000. *Older Americans 2000: Key Indicators*. Hyattsville, MD.
- U.S. Department of Health and Human Services. 2000. *Healthy People 2010*. Washington, D.C.
- Wagner, C. 2001. "Aging versus Anti-Aging: Geriatrics Is in Trouble While Anti-Aging Medicine Takes Off," *The Futurist*, 35(5): 8-9.